

REMARKS

A. INTRODUCTION

Claims 1-25 are pending. Applicants note with appreciation the Examiner's allowance of Claims 12-23.

With regard to the remaining claims, Claims 1, 4-6, 8, and 24 stand rejected under 35 U.S.C. § 102 as being anticipated by Hall (U.S. Patent No. 3,307,787). Claim 3 stands rejected under 35 U.S.C. § 103 as being obvious in view of Hall. Each of these rejections is addressed separately below. Claims 2, 7, and 9-11 stand objected to but would be allowable if rewritten in independent form. As explained below, Claims 2, 7, and 9-11 have been rewritten into independent form such that they do not depend either directly or indirectly on a presently rejected claim.

Claim 25 is a new claim and is submitted as being allowable for the reasons discussed below.

B. CLAIMS 1, 4-6, 8, AND 24 ARE NOT ANTICIPATED

For the reasons discussed below, Claims 1, 4-6, 8, and 24 are not anticipated by Hall. Claims 1 and 24 have been amended to clarify that the present invention is directed to irrigation. More specifically, amended Claims 1 and 24 include a number of limitations not disclosed by Hall. For example, Claims 1 and 24 both include a structural limitation directed to a spray head having "a member disposed within the body and defining at least one swirl port." As recited in Claim 1, the "at least one swirl port" is "situated in the first channel water flow path for inducing a circumferential flow component to water in the cavity." Similarly, as recited in Claim 24, the "at least one swirl port" induces "a circumferential flow component to the first portion of pressurized water." By inducing a circumferential flow component, the at least one

swirl port acts to disperse water in a radially outwardly direction through the proximate port.

Claims 1 and 24 also include a structural limitation directed to the plurality of secondary channels of the spray head. In Claim 1, "each secondary channel defines a pressure-reducing tortuous flow path to reduce the velocity of water flowing therethrough and is adapted to disperse water in a wedge-shaped spray pattern to an area close to the spray head relative to water dispersed from the proximate port." Claim 24 includes means for dispersing a second portion of water "to an area close to the spray head relative to the first portion of pressurized water dispersed through the proximate port." The dispersion of water relatively close to the spray head provides improved irrigation coverage.

Claims 1 and 24 further include a limitation directed to the characteristic of water flow through the spray head. As recited in Claim 1, "the dispersion of water through the proximate port and each of the sidewall ports is continuous and unobstructed when water is supplied from the water source." Claim 24 recites, "the dispersion of the first portion of pressurized water and the second portion of pressurized water is continuous and unobstructed when water is supplied from the water source."

Hall does not disclose a spray head having the above limitations, *i.e.*, the "swirl port," "secondary channel," "second portion," and "continuous and unobstructed" flow limitations, as set forth in amended Claims 1 and 24. These limitations, as stated in each claim, are directed to irrigation, which includes a controlled supply of water to a desired area about the sprinkler.

Instead, Hall, entitled "Fountain," is directed to "ornamental water fountains" and "floating ornamental fountain unit[s]" that are intended to produce visually-appelling water spray patterns. (Col. 1, lines 11-34.) The fountain valve 10 disclosed in Hall operates generally through the use of a sleeve valve 48 that oscillates up and down in response to water pressure to sequentially open and close various flow channels 20,

22, 24, and 26. (Col. 3, line 35 – Col. 4, line 4.) As can be seen from FIG. 1 of Hall, as the sleeve valve 48 moves upwardly, water is emitted in sequence through flow channel 20, then channel 22, then channel 24, and lastly, from channel 26. Water is only permitted to flow through one channel at a time; water flow through the other channels is blocked at that time. (Figs. 1, 6.) As a result, the fountain valve 10 emits periodic pulses of water in succession through its various flow channels 20, 22, 24, and 26, and generally vertically through jets 28. (Figs. 1, 6.) This serial pulsing of water is intended to provide a spray pattern that is pleasant for viewers to behold. This, however, has nothing to do with providing a controlled distribution of water to a desired area about the fountain for irrigation.

Accordingly, Hall does not disclose the three limitations of Claims 1 and 24 discussed above. First, Hall does not disclose the “swirl port” limitation of Claims 1 and 24. Hall has no structure that induces circumferential water flow.

Second, Hall does not disclose the “secondary channel” and “second portion” limitations of Claims 1 and 24. More specifically, the channels 20, 22, 24, and 26 in Hall do not define a “a pressure-reducing tortuous flow path” and are not “adapted to disperse water in a wedge-shaped spray pattern,” as recited in Claim 1, and do not disperse water “to an area close to the spray head relative to ... water dispersed from the proximate port,” as recited in Claims 1 and 24. Instead, the channels 20, 22, 24, and 26 in Hall are adapted to disperse water in a generally vertical direction. (Fig. 6.)

Third, Hall does not disclose “continuous and unobstructed” water flow through the proximate port and each of the sidewall ports. In fact, Hall discloses the exact opposite. Hall discloses the sequential pulsing of water through channels 20, 22, 24, 26, and 46. (Col. 3, line 35 – Col. 4, line 4.)

Hall does not in any way teach or suggest Claims 1 and 24. Hall is directed to ornamental fountains that provide a visually-appealing spray pattern; it has absolutely nothing to do with the field of irrigation devices. Claims 1 and 24 are directed generally

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to a spray head that includes two water flow paths, or pressurized water portions, one to disperse water to a coverage area spaced from the spray head and a second flow path, or second pressurized water portion, for increased water dispersion relatively close to the spray head to cover the area between the spray head and that covered by the first flow path. Hall plainly is not directed to a spray head providing such irrigation coverage. Moreover, Hall is not directed to combining a number of spray patterns to achieve improved irrigation coverage. One of ordinary skill in the field of irrigation devices would not look to Hall for guidance in solving irrigation device problems.

Accordingly, Applicants respectfully submit that independent Claims 1 and 24, and corresponding dependent Claims 4-6 and 8, are not anticipated by Hall. Applicants respectfully request allowance of these claims.

C. CLAIM 3 IS NOT OBVIOUS IN VIEW OF HALL

Claim 3 depends from independent Claim 1. For the reasons set forth above, dependent Claim 3, which includes the limitations of Claim 1, and which includes additional limitations, also contains allowable subject matter. Applicants, therefore, respectfully request reconsideration and allowance of dependent Claim 3.

D. CLAIMS 2, 7, AND 9-11 HAVE BEEN REWRITTEN IN INDEPENDENT FORM

The Office Action indicates that Claims 2, 7, and 9-11 would be allowed if rewritten into independent form. Applicants have amended Claim 2 to include the limitations of original base Claim 1, have amended Claim 9 to include the limitations of original base Claim 1 and intervening Claim 8, and have amended Claim 11 to include the limitations of original base Claim 1. Claims 7 and 10 depend from Claims 2 and 10 respectively, include the limitations of these claims, and should therefore be allowable. Accordingly, Applicants respectfully request allowance of Claims 2, 7, and 9-11.

E. NEW CLAIM 25 IS ALLOWABLE BECAUSE IT DEPENDS FROM
ALLOWABLE INDEPENDENT CLAIM 1

Applicants have added new Claim 25, which depends from independent Claim

1. For the reasons set forth above, independent Claim 1 sets forth allowable subject matter. Accordingly, new Claim 25, which includes the limitations of Claim 1, and which includes additional limitations, also contains allowable subject matter. Applicants, therefore, respectfully request consideration and allowance of new Claim 25.

CONCLUSION

Based on the foregoing, Applicants respectfully request allowance of all pending claims of this application. The Commissioner is hereby authorized to charge any additional fees which may be required in this application to Deposit Account No. 06-1135.

Respectfully submitted,
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